

NSR0320MW2T1

Schottky Barrier Diode

These Schottky barrier diodes are designed for high current, handling capability, and low forward voltage performance.

- Low Forward Voltage – 0.24 Volts (Typ) @ $I_F = 10 \text{ mAdc}$
- High Current Capability
- ESD Rating – Human Body Model: CLASS 3B
– Machine Model: C
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish

MAXIMUM RATINGS ($T_J = 125^\circ\text{C}$ unless otherwise noted)

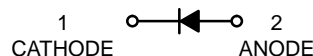
Rating	Symbol	Value	Unit
Reverse Voltage	V_R	20	Vdc
Peak Reverse Voltage	V_{RM}	23	V
Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_F	200 2.0	mW mW/ $^\circ\text{C}$
Forward Current (DC) Continuous	I_F	1	A
Forward Current $t = 8.3 \text{ ms}$ Half Sinewave	I_F	5	A
Junction Temperature	T_J	125 Max	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$



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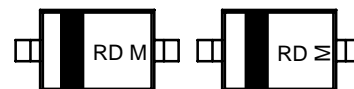
HIGH CURRENT SCHOTTKY BARRIER DIODE



MARKING DIAGRAM



SOD-323
CASE 477
STYLE 1



RD = Specific Device Code
M = Date Code

ORDERING INFORMATION

Device	Package	Shipping†
NSR0320MW2T1	SOD-323	3000/Tape & Reel
NSR0320MW2T3	SOD-323	10,000/Tape & Reel
NSR0320MW2T1G	SOD-323	3000/Tape & Reel
NSR0320MW2T3G	SOD-323	10,000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

NSR0320MW2T1

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Total Capacitance ($V_R = 5.0\text{ V}$, $f = 1.0\text{ MHz}$)	C_T	-	30	35	pF
Reverse Leakage ($V_R = 15\text{ V}$)	I_R	-	10	50	μA_{dc}
Reverse Leakage ($V_R = 2.0\text{ V @ } 85^\circ\text{ C}$)	I_R	-	200	300	μA
Reverse Leakage ($V_R = 15.0\text{ V @ } 85^\circ\text{ C}$)	I_R	-	450	1000	μA
Forward Voltage ($I_F = 10\text{ mAdc}$)	V_F	-	0.24	0.27	Vdc
Forward Voltage ($I_F = 100\text{ mAdc}$)	V_F	-	0.30	0.35	Vdc
Forward Voltage ($I_F = 900\text{ mAdc}$)	V_F	-	0.45	0.50	Vdc

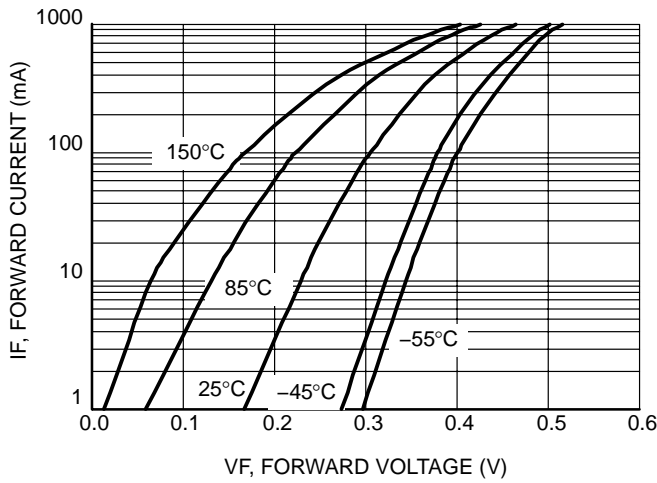


Figure 1. Forward Voltage

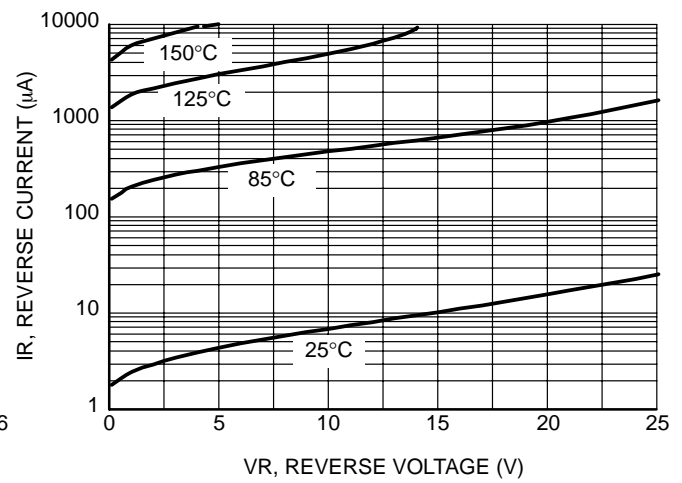


Figure 2. Leakage Current

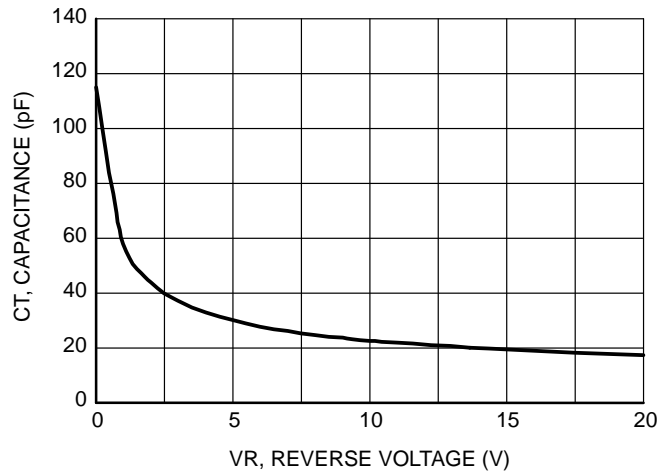
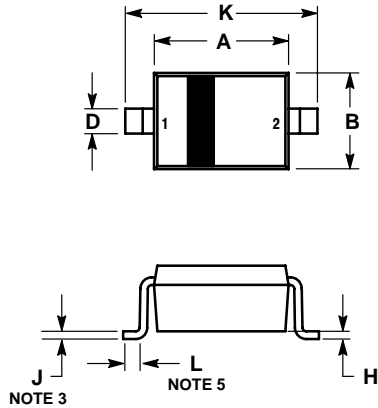


Figure 3. Total Capacitance

NSR0320MW2T1

PACKAGE DIMENSIONS

SOD-323
CASE 477-02
ISSUE D



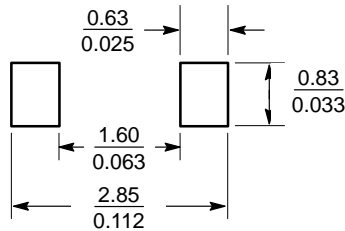
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106
L	0.075	---	0.003	---

STYLE 1:
PIN 1. CATHODE
2. ANODE

SOLDERING FOOTPRINT*



SCALE 10:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$

*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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